

## Supplemental files

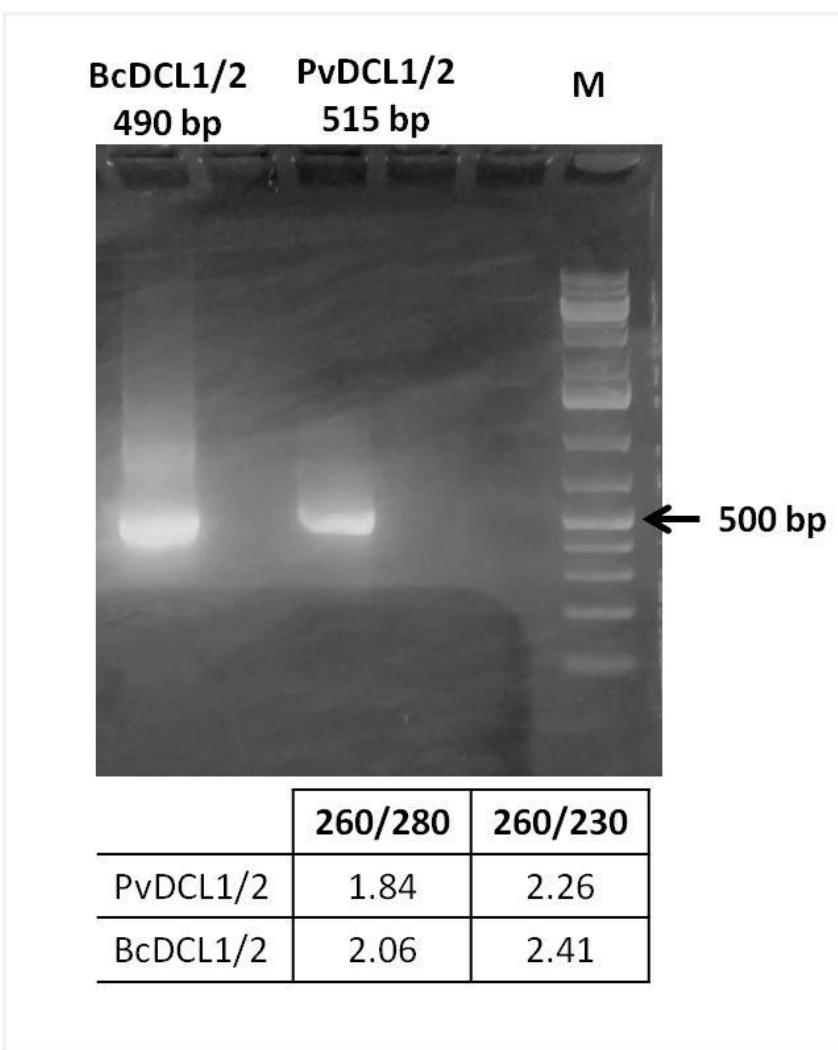
Supplemental Table 1. Sequences used for double strand RNA synthesis.

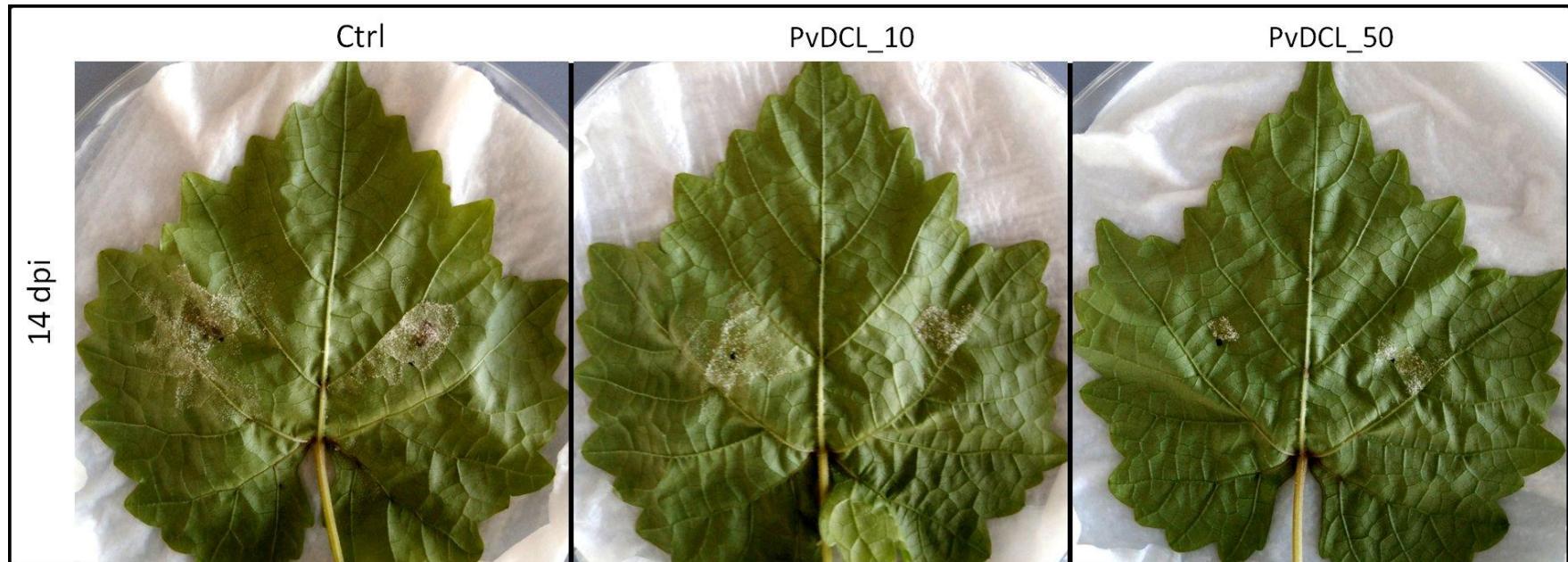
Gene ID	Gene name	Sequence
PVITv1_T038441	<i>PvDCL1</i>	ATGATGGACACCTCGTTGTGGGAGCACCAACGGGAGAT CGTGGCTGTGGCGCAGACATCGCAGCGTGTAGTGAGTA GTTCGCAGTCTGTAGGAAAGACGCATGTAAGCTGTGCA CTGCTGTGCGAGGCCGCTGCCTCTAGTCCGAAGCTACAC GCATTGGCGATTGCTGCATCGCCTGTGGGCCGATCGGCT CTACAGACGCAGCTAGCGAGACTGTGTGGACTTCGCGT GCTCTGTAGCGATTAGACAATGCAAGA
PVITv1_T003331	<i>PvDCL2</i>	TAGGCAGATACGGGAATCGGCAAAACCTTCTGCCATAG CATTATTGTCCGAGCAAGACTACTCGGGCGACCGACGTG CGTTCTTATGGCTCCGACCCGCCAGTTGGTGGTGCAGA TTACGGCCAAGATTGCCAGACGAGCACGTTGCGCGTC AATTCTGTATTGCCAGGGACAGCTGATTGTGGGACGCC ACACAGTGGGAACGGGAGCTGCAGCTCACCGCGTGTGTT TGTGTGCACACCCGAGATTGTACGC

Supplemental Table 2. List of qPCR primers used. Gene identification, gene name, primer name, and primer sequence are provided.

Gene ID	Gene name	Primer name	Primer sequence
PVITv1_T004162	PveIF1b	PveIF1b_F	ACAACGGTGCAAGGCTTAGC
		PveIF1b_R	ACTCGCGAATGTTAGTCCGC
PVITv1_T038441	<i>PvDCL1</i>	PvDCL1_F	AGCGAGACTGTGTGGACTTC
		PvDCL1_R	GCCTTTCGCAGCATCTCTT
PVITv1_T003331	<i>PvDCL2</i>	PvDCL2_F	CGGACAGCTGATTGTGGGA
		PvDCL2_R	GGCACTCGTCAAACACTAGC

Supplemental Figure 1. Agarose gel electrophoretic analysis of PvDCL1/2 and BcDCL1/2 dsRNA chemically synthesized by AgroRNA (Genolution Inc., Seoul, Republic of Korea). Samples, diluted 40x were loaded as 5  $\mu$ L. M: size molecular marker. The quality of the dsRNA, as measured by 260/280 and 260/230 absorbance, was quantified by NanoDrop 1000 Spectrophotometer (Thermo scientific, Waltham, USA).





Supplemental Figure 2. Externally applied *PvDCL1/2* dsRNA on detached grapevine leaves inhibited *Plasmopara viticola* infection. Leaves were treated with 50  $\mu$ L of water (ctrl) or dsRNA before inoculated with 7.5  $\mu$ L of a  $1 * 10^5$  mL $^{-1}$  sporangia. PvDCL-10: PvDCL1/2 dsRNA at 10 ng  $\mu$ L $^{-1}$  concentration; PvDCL-50: PvDCL1/2 dsRNA at 50 ng  $\mu$ L $^{-1}$  concentration; dpi: days post inoculation